

INTEGRATED CIRCUIT PACKAGE HAVING BYPASS CAPACITORS COUPLED TO
BOTTOM OF PACKAGE SUBSTRATE AND SUPPORTING SURFACE MOUNTING
TECHNOLOGY

5 ABSTRACT OF THE INVENTION

An integrated circuit package is disclosed. The integrated circuit package includes a package substrate having a top and a bottom. Further, the integrated circuit package includes a plurality of bypass capacitors coupled to the bottom of the package substrate without a cavity. Moreover, the integrated circuit package includes
10 an array of solder balls formed on the bottom of the package substrate. The array of solder balls facilitates surface mounting to a printed circuit board assembly. Also, the solder balls provide sufficient space between the printed circuit board assembly and the bypass capacitors. In an embodiment, the package substrate is an organic substrate.